

Mobile Payment System Database

PayMobile 2.0
March 2010

История изменений

Дата	Автор	Описание
05.03.2010	Тулупов Е.А.	Создан

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1 Сокращения

1.1 Общие

ВДО	Select For Update DML.
ЗИД	Защитный Идентификатор Договора.
ЗО	Запрос на Обслуживание.
ИАП	Идентификатор Алгоритма Подписи.
ИКМК	Индекс КМК.
ИП	Идентификатор Процессора.
КЗО	Контроллер Запросов на Обслуживание.
КМК	Корневой МК.
МК	Мастер Ключ.
СЖ	Системный Журнал.
СМПП	SMPP.
СМС	SMS.
СП	Счетчик Подписей.
СЧ	Случайное Число.
ХТТПС	HTTPS соединение.
ШС	Шифрованное TLS/SSL Соединение.

1.2 Специальные

ACC	Account.
CSI	Contract's SI.
IFC	Interface.
MC	Message Code.
NTF	Notification.
PI	Processor Identifier.
PK	Primary Key.
PTC	Payment Type Code (КНП).
RMKI	Root Master Key Index.
RN	Random Number.
SAI	Signature Algorithm Identifier.

SI	Security Identifier.
SN	Signature.
SR	Service Request.
SRC	SR Controller (K3O).
ST	Statement.

2 Пользователи

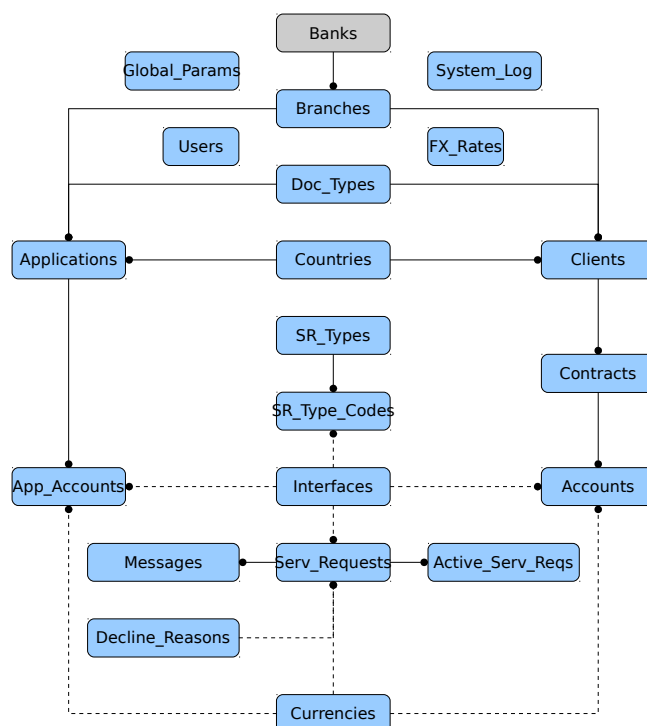
1. Pay_Mobile
2. App_Entry
3. Officer
4. Front_Server
5. SMPP_Server
6. Interface
7. SRC

3 Табличные пространства

1. Applications – APP
2. Contracts – CONTR
3. Dictionaries – DIC
4. Messages – MSG
5. Miscellaneous – MISC
6. Service Requests – SR

4 Таблицы

4.1 Схема



4.2 Типы

ACC_Type = VarChar2(70)

Amount_Type = Number(12,2)

IFC_Type = VarChar2(32)

MC_Type = VarChar2(256)

PK_MaxValue = "999999999999"

PK_Type = Number(12)

User_Type = VarChar2(64)

4.3 Header

Name	Type	Null	Default	Remarks
Id\$	PK_Type	No		
Status\$	VarChar2(1)	No	C	Current, Deleted, History
Date\$	Date	No	SysDate	

Name	Type	Null	Default	Remarks
User\$	User_Type	No		
HU\$	PK_Type	Yes		History Uniqueness
CId\$	PK_Type	Yes		Current Id

Index (CId\$)

4.4 Branches [DIC]

Header +

Name	Type	Null	Default	Remarks
Name	VarChar2(256)	No		

Unique Index (Name, HU\$)

4.5 Doc_Types [DIC]

Header +

Name	Type	Null	Default	Remarks
Name	VarChar2(256)	No		

Unique Index (Name, HU\$)

4.6 Countries [DIC]

Header +

Name	Type	Null	Default	Remarks
Name	VarChar2(256)	No		

Unique Index (Name, HU\$)

4.7 Currencies [DIC]

Header +

Name	Type	Null	Default	Remarks
Code	VarChar2(3)	No		
Name	VarChar2(256)	No		

Unique Index (Code, HU\$)

Unique Index (Name, HU\$)

4.7.1 Данные

Code	Name
AUD	Австралийский доллар
CAD	Канадский доллар
CHF	Швейцарский франк
EUR	Евро
GBP	Английский фунт
JPY	Японская Йена
KGS	Киргизский сом
KZT	Казахстанский тенге
RUR	Российский рубль
USD	Американский доллар

4.8 Users [DIC]

Header +

Name	Type	Null	Default	Remarks
Sys_Name	User_Type	No		
Full_Name	VarChar2(256)	No		

Unique Index (Sys_Name, HU\$)

Unique Index (Full_Name, HU\$)

4.9 Status_Details [DIC]

Header +

Name	Type	Null	Edit	Default	Remarks
Code	Number(3)	No	No		0-229
Name	VarChar2(256)	No	Yes		
Send_SMS	VarChar2(1)	No	Yes	N	Yes, No
SMS_Text	VarChar2(160)	Yes	Yes		

В таблицу нельзя ни добавить запись, ни удалить.

Unique Index (Code, HU\$)

Unique Index (Name, HU\$)

4.9.1 Данные

Code	Name	Send_SMS
0	Успешно	Y

Code	Name	Send_SMS
1	Подключен к услуге	Y
223	Договор заблокирован	Y
224	Операция запрещена	Y
225	Неверный пароль	Y
226	Исчерпан лимит проверок пароля	Y
227	Превышен лимит счета	Y
228	Неверный формат	N
229	Системная ошибка	Y

4.10 Global_Params [DIC]

Header +

Name	Type	Null	Default	Remarks
Param	VarChar2(128)	No		
Value	VarChar2(256)	No		

Unique Index (Param, HU\$)

4.10.1 Данные

Parameter	Value
PSW_TRIES_LIMIT	3
LOCAL_CURRENCY	KZT

4.11 Interfaces [DIC]

Header +

Name	Type	Null	Default	Remarks
Code	IFC_Type	No		
Name	VarChar2(128)	No		

Unique Index (Code, HU\$)

Unique Index (Name, HU\$)

4.11.1 Данные

Code	Name
SMPP	SMPP Сервер
SYS	Системный

4.12 SR_Types [DIC]

Header +

Name	Type	Null	Default	Remarks
Name	VarChar2(256)	No		
Is_2_Phase	VarChar2(1)	No	N	Yes, No
Send_SMS	VarChar2(1)	No	N	Yes, No
Is_Cancellable	VarChar2(1)	No	N	Yes, No

Unique Index (Name, HU\$)

4.13 SR_Type_Codes [DIC]

Header +

Name	Type	Null	Default	Remarks
SR_Type__Id	PK_Type	No		
Interface	IFC_Type	No		
Type	VarChar2(1)	No		Initialization, Source, Destination, Cancellation
Code	MC_Type	No		

Unique Index (SR_Type__Id, Interface, Type, HU\$)

Unique Index (Interface, Type, Code, HU\$)

4.14 FX_Rates [MISC]

Header +

Name	Type	Null	Default	Remarks
Currency	VarChar2(3)	No		
Buy	Number(10,4)	No		> 0
Sell	Number(10,4)	No		> 0

Unique Index (Currency, HU\$)

4.15 System_Log [MISC]

Name	Type	Null	Default	Remarks
Id\$	PK_Type	No		
Occurred_At	Date	No	SysDate	
Code	VarChar2(16)	No		
Description	VarChar2(4000)	Yes		
SR_Id	PK_Type	Yes		

Name	Type	Null	Default	Remarks
Contract__Id	PK_Type	Yes		
User\$	User_Type	Yes		

Index (Occurred_At)

Index (SR__Id)

Index (Contract__Id)

Index (User\$)

4.16 Applications [APP]

Name	Type	Null	Edit	Default	Remarks
Id\$	PK_Type	No	No		
Status	VarChar2(1)	No	No	W	Waiting, Initialization, Applied, Accepted, Declined
Applied_At	Date	No	No	SysDate	
Country__Id	PK_Type	No	Yes		
Doc_Type__Id	PK_Type	No	Yes		
Doc_Id	VarChar2(64)	No	Yes		
Branch__Id	PK_Type	No	Yes		
Phone_Number	Number(15)	No	No		> 0
Manager	User_Type	Yes	No		
Manager_Date	Date	Yes	No		
Last_Name	VarChar2(128)	Yes	Yes		
First_Name	VarChar2(128)	Yes	Yes		
Birth_Date	Date	Yes	Yes		
Doc_Date	Date	Yes	Yes		
Doc_Issuer	VarChar2(256)	Yes	Yes		
Tax_Payer_Id	VarChar2(64)	Yes	Yes		
Address	VarChar2(4000)	Yes	Yes		
Middle_Name	VarChar2(128)	Yes	Yes		
Decline_Reason	VarChar2(1024)	Yes	No		

Index (Applied_At)

Index (Phone_Number)

Index (Last_Name, First_Name)

4.17 App_Accounts [APP]

Name	Type	Null	Edit	Default	Remarks
Id\$	PK_Type	No	No		
Application__Id	PK_Type	No	No		
Kind	VarChar2(1)	No	Yes		Sender, Receiver
Interface	IFC_Type	No	Yes		
A_Number	ACC_Type	No	Yes		
Name	VarChar2(256)	No	Yes		
Single_Amount	Amount_Type	Yes	Yes		>= 0
Single_Currency	VarChar2(3)	Yes	Yes		
Day_Amount	Amount_Type	Yes	Yes		> 0 and >= Single_Amount
Day_Currency	VarChar2(3)	Yes	Yes		
Day_Quantity	Number(5)	Yes	Yes		1-65 535
Month_Amount	Amount_Type	Yes	Yes		> 0 and >= Day_Amount
Month_Currency	VarChar2(3)	Yes	Yes		
Month_Quantity	Number(5)	Yes	Yes		1-65 535 and >= Day_Quantity
From_Hour	Number(2)	Yes	Yes		>= 0 and < 24
From_Min	Number(2)	Yes	Yes		>= 0 and < 60
To_Hour	Number(2)	Yes	Yes		>= 0 and < 24
To_Min	Number(2)	Yes	Yes		>= 0 and < 60
					To_Hour > From_Hour or (To_Hour = From_Hour and To_Min >= From_Min)

Unique Index (Application__Id, Kind, Interface, A_Number)

Unique Index (Application__Id, Kind, Name)

4.18 Clients [CONTR]

Header +

Name	Type	Null	Edit	Default	Remarks
Country__Id	PK_Type	No	Yes		
Doc_Type__Id	PK_Type	No	Yes		
Doc_Id	VarChar2(64)	No	Yes		
Branch__Id	PK_Type	No	Yes		
From_Date	Date	No	No	SysDate	
Last_Name	VarChar2(128)	Yes	Yes		
First_Name	VarChar2(128)	Yes	Yes		
Birth_Date	Date	Yes	Yes		

Name	Type	Null	Edit	Default	Remarks
Doc_Date	Date	Yes	Yes		
Doc_Issuer	VarChar2(256)	Yes	Yes		
Tax_Payer_Id	VarChar2(64)	Yes	Yes		
Address	VarChar2(4000)	Yes	Yes		
Middle_Name	VarChar2(128)	Yes	Yes		

Unique Index (Country__Id, Doc_Type__Id, Doc_Id, HU\$)

Index (Last_Name, First_Name)

Index (From_Date)

4.19 Contracts [CONTR]

Header +

Name	Type	Null	Edit	Default	Remarks
Client__Id	PK_Type	No	No		
SI	PK_Type	No	No		
Status	VarChar2(1)	No	No	K	Checked, Approved, Blocked, Closed
Open_Date	Date	No	No	SysDate	
Phone_Number	Number(15)	No	No		> 0
SC	Number(5)	No	No	1	1-65 535
Password_Tries	Number(1)	No	No	0	>= 0
Close_Date	Date	Yes	No		> Open_Date
A_Number	VarChar2(128)	Yes	Yes		

Index (Client__Id)

Index (Phone_Number)

Index (Open_Date, Close_Date)

Index (A_Number)

4.20 Accounts [CONTR]

Header +

Name	Type	Null	Edit	Default	Remarks
Contract__Id	PK_Type	No	No		
Kind	VarChar2(1)	No	Yes		Sender, Receiver
Interface	IFC_Type	No	Yes		
A_Number	ACC_Type	No	Yes		
Name	VarChar2(256)	No	Yes		

Name	Type	Null	Edit	Default	Remarks
Single_Amount	Amount_Type	Yes	Yes		>= 0
Single_Currency	VarChar2(3)	Yes	Yes		
Day_Amount	Amount_Type	Yes	Yes		> 0 and >= Single_Amount
Day_Total_Amount	Amount_Type	Yes	No		>= 0 and <= Day_Amount
Day_Currency	VarChar2(3)	Yes	Yes		
Day_Quantity	Number(5)	Yes	Yes		1-65 535
Day_Total_Quantity	Number(5)	Yes	No		>= 0 and <= Day_Quantity
Day_Date	Date	Yes	No		
Month_Amount	Amount_Type	Yes	Yes		> 0 and >= Day_Amount
Month_Total_Amount	Amount_Type	Yes	No		>= 0 and <= Month_Amount
Month_Currency	VarChar2(3)	Yes	Yes		
Month_Quantity	Number(5)	Yes	Yes		1-65 535 and >= Day_Quantity
Month_Total_Quantity	Number(5)	Yes	No		>= 0 and <= Month_Quantity
Month_Date	Date	Yes	No		
From_Hour	Number(2)	Yes	Yes		>= 0 and < 24
From_Min	Number(2)	Yes	Yes		>= 0 and < 60
To_Hour	Number(2)	Yes	Yes		>= 0 and < 24
To_Min	Number(2)	Yes	Yes		>= 0 and < 60
					To_Hour > From_Hour or (To_Hour = From_Hour and To_Min >= From_Min)

Unique Index (Contract__Id, Kind, Interface, A_Number, HU\$)

Unique Index (Contract__Id, Kind, Name, HU\$)

4.21 SRs [SR]

Name	Type	Null	Default	Remarks
Id\$	PK_Type	No		
Status	VarChar2(1)	No	A	Accepted, SRC-REQ, SRC-RSP, DST-REQ, DST-RSP, Declined, Processed, SRC-CAN, SRC-CRSP
A_Date	Date	No	SysDate	
Phone_Number	Number(15)	No		> 0
CSI	PK_Type	No		
Init_Interface	IFC_Type	Yes		
Type_Code	MC_Type	Yes		
RMKI	Number(3)	Yes		0-255
SAI	Number(3)	Yes		0-255
SC	Number(5)	Yes		1-65 535

Name	Type	Null	Default	Remarks
SRC_Name	VarChar2(256)	Yes		
DST_Name	VarChar2(256)	Yes		
Amount	Amount_Type	Yes		> 0 and < 10 000 000 000
Currency	VarChar2(3)	Yes		
PTC	VarChar2(256)	Yes		
Description	VarChar2(4000)	Yes		
Contract__Id	PK_Type	Yes		
SR_Type__Id	PK_Type	Yes		
SRC_Interface	IFC_Type	Yes		
SRC_Account	ACC_Type	Yes		
DST_Interface	IFC_Type	Yes		
DST_Account	ACC_Type	Yes		
SMS_Sent	VarChar2(1)	Yes		Yes, No
ST_Type	Number(3)	Yes		0-255
Status_Detail	Number(3)	Yes		0-229
Data	Blob	Yes		
RN	Blob	Yes		Not logging ain't easy, therefore nullify it after usage
SN	Blob	Yes		Not logging ain't easy, therefore nullify it after usage

Index (Contract__Id)

Index (A_Date)

4.22 Active_SRs [SR]

Name	Type	Null	Default	Remarks
Id\$	PK_Type	No		
Wait_Time	Number(5)	No	0	>= 0
Sent_Times	Number(3)	No	0	>= 0
Send_NTF	VarChar2(1)	Yes		Yes

4.23 Messages [MSG]

Name	Type	Null	Default	Remarks
Id\$	Number(38)	No		
SR_Id	PK_Type	No		
Interface	IFC_Type	No		
Direction	VarChar2(1)	No		Sent, Received
A_Date	Date	No	SysDate	

Name	Type	Null	Default	Remarks
Data	Blob	No		

Index (SR__Id)

Index (A_Date)